(ii) Agricultural.

565. The acreage and production of the principal crops of Mysore were :

	Acreage		Production in tons	
	1953-54	1954-55	1953-54	1954-55
1. Paddy ...	8,57,107	84,7,773	4,35,818	3,71,490
2. Ragi ...	...	18,94.184	4,23,055	4,90,859
3. Jowar ...	9,73,249	9,39,031	...	2,07,892
4. Wheat ...	3,793	3,307	...	1,182
5. Sugarcane ...	58,151	...	88,628	...
6. Groundnut ...	4,42,833	5,33,262	1,27,191	1,19,325
7. Cotton ...	...	4,35,953	...	1,39,497 (bales)
8. Potato ...	4,551	11,019	..	7,319
9. Tobacco ...	28,998	33,502	..	3,863
10. Bengalgram ...	39,637	30,011	..	3,816

566. There were four institutions during the year imparting agricultural education :—

1. Agricultural College at Hebbal,
2. Agricultural School at Hebbal,
3. Kannada Agricultural School, R. K. Sala, Anekal.
4. Kannada Agricultural School, Somanahalli, Maddur

567. The strength of the Agricultural College was 145.

568. The Lectures in Agricultural Economics has conducted Village Economic Surveys as part of Partical Work under Agricultural Economics.

569. The Agricultural Engineering section of the Department has devised an equipment for injecting anhydrous ammonia directly into the soil.

570. The expenditure on the College was Rs. 1·95 lakhs, on the school Rs. 11, 010 and the College workshop Rs. 12, 390.

Kannada Agricultural Schools.

571. The S. K. V. D. Patasala Farm was handed over to the Department of Public Instruction in July 1954.

572. The Agricultural School at Anekal and Somanahalli were converted into Basic Agricultural School on a temporary basis.

573. The Agricultural Schools at Anekal and Somanahalli were converted into Basic Agricultural Schools on a temporary basis in November 1954.

574. The basic agricultural schools sponsored by the Government of India (I.C.A.R.) and financed by them is intended to provide a pre-extension training to non-agriculturally qualified entrants. The minimum qualification for admission is S.S.L.C. (E.P.S.).

575. *Plant Improvement*—Six selections of Bangarkovi, Kempukovi and Ganakovi crosses were tried for their yields with S. 661 (Coimbatore Sanna) and S. 749 (Rathnachudi) as check varieties. The yield of grain varied from 3,340 lbs. to 4,220 lbs. per acre, but the differences in yields form the different crosses were not statistically significant. It is of interest to note S. 1079, a Ganakovi selection matured a month earlier than S. 661 and gave a higher yield than S. 749. Paddy

576. Twelve early varieties from China, Burma, etc. were compared with two early varieties evolved by the department—S.317, Halubbalu and S. 705 and Bangarkaddi. The differences in yields were significant B.I. 6 (from Burma) and Ch. 45 (from China), have given yields of 3,900 and 3,575 lbs. per acre respectively against 2,875 and 2,425 lbs. for S. 31 and S. 705 (critical difference-448 lbs. per acre). Two other varieties Ch. 2 and H.R. 5, Ch. 47 and Ch. 10 are better than S. 705. Ch. 2 and Ch. 4 mature earlier than S. 705.

577. Nine Burma cultures were tried with B. 1370, local standard variety. None of them, however, proved better than the local B. III-B is somewhat promising.

578. Some of the above trials were conducted at the Paddy Breeding Station, Nagenahalli.

579. Bangarkovi, Kempukovi and Ganakovi selections were also tried at Hebbal under tank fed conditions. S. 1079 Ganakovi crosses gave over 300 lbs. of grain, but as the critical difference was 930 lbs. to attain significance, they proved superior only to Co. 27 and Co. 28, two varieties from Coimbatore.

580. Twelve early varieties were also tried at Hebbal. Two varieties S.R. 26-B and Luchia x Gurumatis x Burma gave significantly higher yields of 3,480 lbs. and 3,310 lbs.

AGRI., CO-OPN. & FORESTS

of grams per acre, respectively, than the local standard variety S. 317 Halubbalu which gave 2,740 lbs. per acre. However, as at Nagenahalli, six varieties out yielded S. 705 Bangardoddi.

581. Besides, these large scale trials, several smaller ones were conducted.

582. *The Mysore Agricultural and experimental Union.*—This Union which has sponsored and organised by the Department had on its roll 529 life members, 3,758 ordinary members and 7,628 primary members. Two Agricultural journals (a quarterly in English and a monthly in Kannada) were published for addition to its many activities, it has made arrangements to hold an Agricultural Seminar in the early of 1956 at Hebbal.

Ragi.

583. The ragi trials were mainly conducted at Hebbal. Ninety-nine cultures were in row trials, 11 selections in line cultures, 53 in replicated row trials, 21 in yield trials 10 in seed nucleus plots.

584. Among the 27 early cultures in row trials R. 003 gave indications of yielding more than the standard, Ragi 1, (K. 1). Among 72 late cultures in the same trials R. 0755 gave a percentage increase of 72 over Ragi 22, the old H. 22 which has been in cultivation during the past 3 decades. In line cultures Modur 24 gave an increase of 59 per cent over ragi 1 and Modur 22 while not being superior to RS. 22 gave a straw yield of 73 per cent more than this old variety.

585. In replicated row trials R. 0794 was found a higher yields than ragi 1 in point of grain but not of straw. R. 0794 did well in the previous year's trial also. In the late varieties (34 in number) in row trials, R. 0272 has given an yield of 96 per cent over ragi 22.

586. *Navane Italian Millet. Setaria Italica Beauv.*—Twenty-three cultures were under bulk yield trials at Siruguppa. Only in one set of 10 varieties did the differences in yield show statistical significance. N.1 (Nandyal) the standard variety continued to hold the field. The Red Navane 1 from Hiriyur was out-standing in its straw yield. Among selections from the districts, 19 in number, nine gave a heavier yield than N.1. At Hiriyur 45 varieties were under observations. One hundred and seven selections were in progeny row trials.

587. Navane was not found suitable as an irrigated crop.

588. *Sweet Potato Ipomea batatas.*—The tuber scheme partly financed by the Indian Council of Agricultural Research was in the final year and terminated on 1st April 1955.

589. During the year, 53 varieties and 21 seedlings in the collection plot were under observation. In replicated row trials 31 varieties were compared with the standard Deenabandhu.

590. *Groundnut Arachis hypogea L.*—The work was conducted mainly at Hebbal. Among spreading varieties G. 0974 gave a yield of 21 per cent more than 7. In bunch early types, H.G. 8 was the heaviest yielder. Among bunch late types Lubalala (Tanganyika), A 22 and a hybrid from U.S.A. have given higher yields than H.G. 10. In replicated row trials, local bunch from Uganda was the heaviest yielder among valencies—the yield being on par with Spanish. Among Spanish types, G.F.A. Spanish (U.S.A.) has given a slightly higher yield than H.G.9. As many as 14 varieties among spreading types have surpassed. T.M.V.I. 1,205 lbs. of seeds of improved varieties have been collected for distribution.

591. *Chilie Capsicum annum Linn.*—For some years past a collection of chilli varieties and types was being built up at the Agricultural Research Station, Mandya (former Visvesvaraya canal farm).

592. Cotton Improvement is distributed over 4 stations, Mandya (up lands) Hiriyur (Asiatic) Hagari (Western) and Siruguppa. Cotton.

593. *Asiatic Cottons.*—Sixty cultures were maintained in observation rows. One hundred and twenty-one cultures in progeny row trials were studied. The ginning out-turn in these types varied between 28 to 38 and the staple length between 14/16 to 1 1/16 Sel 69 × Suvog and Sel. 69 × Vijaya indicated wilt resistance. Some Interspecific hybrids gave a ginning out-turn of 33–38 per cent and a staple length of 14/16—1 1/32.

594. *Western Cotton.*—Seventy crosses, direct and multiple were under study. Eighty promising crosses (F 2)

AGRI, CO-OPN. & FORESTS

were raised for examination of fibre characters. Five hundred and seventy-two selections were under row tests. Twenty-two selections were under compact family block trials for purity tests. In the strain trials, 15 promising cultures were compared with Wester 1. Two selections have given higher yield than the control both under rainfed and irrigated conditions. Two other cultures have registered a six per cent increase in ginning out-turn over the control. Majority of the cultures have higher staple values.

595. *Long staple American Cotton.*—Seven Homozygoas strains possessing superiority in all the qualitative characters over M.A.V., the standard variety now in cultivation over all the Doddabatti (upland cotton) region in the State, were compared with M.A.V. and M.V.I at Mandya. Four strains, 14-2, 35-4, 30-1, 4-1 (crosses between M.A.V. and Tidewater in three cases and between M.A.V. and Express) have given significantly higher yield than the contorls. All those four have a longer staple and three have recorded a higher ginning.

596. Two hundred and fifteen progenies from interspecific crosses were in replicated progeny row trials. Ten selections have excelled the control in yield as well staple length.

597. *Cambodia Cotton.*—This work was conducted at Siruguppa. The 32 crosses and 22 back crosses effected in the previous season were tested this year.

598. The performance of nine crosses were outstanding both in regard to halo length and ginning percentage. Forty-nine plants in the F.2 generation were under study. Ten crosses were found superior to M.A.II both in staple and ginning. A total of 455 crosses comprising of 29 direct and 52 back crosses were effected mainly with a view to transfer the Black arm diseases resistance factor in strain 2196—4. an highly immune type, to the adaptable types of cotton like M A II and Laxmi.

599. *Agricultural colonies.*—There were as in the previous year four agricultural colonies; Government ordered in July 1954 the conference of proprietory rights, to the resident colonists under certain conditions.

600. *Sugarcane Saccharum Officinarum Linn*— Varietal trials at Hospet. Early varieties: In the six varieties, the differences in yield were not significant but Co., 419 gave the highest yield (36·22 tons) followed by Co. 2199 (34·29) tons.

601. *Mid Season varieties.*—Co. 419, Co. 449 and Co. 650 were tested. The differences in yield were significant, Co. 419 giving the best yield.

602. *Late varieties*—Co 41, Co. 449 and Co. 471 were tried; the yield difference were not significant.

603. *Agricultural Extension.*—Three thousand and eighty-two plots, and 33 subvention farms were laid as against 1,847 and 35, respectively in the previous year.

604. Two thousand, three hundred and six bee hives are being maintained both by Departmental agencies and private bee-keepers. The largest number of hives, 358 was in Bangalore and the smallest in Arakalgud. The average number of hives per bee-keeper was less than 3 for the State, but in Mudigere it was between 6 to 7 and in Doddaballapur 4 to 5. Bee Keeping

605. The total quantity of honey extracted from 2,306 hives was 8,005 lbs. or on an average 3·4 lbs. per hive.

(iii) Sericulture.

606. The rates of reeling cocoons ranged from Rs. 1-4-0 to Rs. 2-4-0 per pound. But during the last quarter the rates of reeling cocoons dropped to Rs. 1-2-0 from Rs. 1-6-0 per pound as a result of the scare created in the raw silk market on account of the barter agreement between the people's Republic of China and India for import of 2 lakhs of pounds of China silk in exchange to indigenous tobacco. The average rate for foreign race seed cocoons was Rs. 9 and the price range was Rs. 8 to Rs. 15. Market Conditions.

607. The rate of raw silk ranged from Rs. 34 to Rs. 44 per pound of local filature silk and Rs. 16 to Rs. 33 per pound for charaka silk.

608. There was a fall in prices from Rs. 40-15 0 to Rs. 34-10-0 per pound of filature silk during the year.